

PROJECT TITLE : ANALYTICAL INVESTIGATIONS  
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#### N-NITROSAMINES

##### SPOTLESS Cigarettes (1)

The analysis of DMN and NPY in the sidestream smoke of the 16 experimental cigarettes of the SPOTLESS series has been completed. The results, summarized in Table 1, will be discussed once the DMN and NPY mainstream smoke values are available (November Progress Report).

##### Tobacco Specific Nitrosamines

Upon the request of PM-Richmond (2), NNN, NNK and NATB were determined in two experimental samples and in the mainstream smoke of 2R1 cigarettes (3).

##### DMN / NPY Reduction in Mainstream Smoke by CA Filter Dilution

In continuation of our studies (4) the influence of dilution on the DMN and NPY concentration in mainstream (MS) and in sidestream (SS) smoke was investigated. Results are given in Table 2.

Table 2

Dilution % <sup>b)</sup>	Mainstream Smoke <sup>a)</sup>		Sidestream Smoke <sup>a)</sup>	
	DMN	NPY	DMN	NPY
0	4.0	7.7	196	51
10	3.7	5.3	221	63
15	2.7	4.7	229	67
20	2.6	4.7	252	73

a) All values in ng/cig.


b) Experimental cigarettes ; MLF (with CA filter) of Project No. 170 - 03 (R. Toimil).

A dilution of 15% reduces the DMN/NPY concentration in MS by 33 - 38%, while the SS concentration is increased by 16% (DMN) resp. 31% (NPY). A higher dilution seems to influence the DMN/NPY concentration in SS only.

The study will be continued.

#### SERVICE FOR OTHER GROUPS

- Following requests by the Leaf Department, lot 3762 (5) (6) and lot 3738 (7) (8), both damaged by white powders, were investigated and the contaminations determined.
- ISH was determined in 78 TLA samples and in two competitive brands.
- Potassium, calcium and magnesium were analysed in 45 NINO extracts by atomic absorption.
- Nicotine was determined by GC in three NINO samples.
- TOC was determined for Biotechnology in 5 samples.
- ET was determined in 9 competitive brands.
- Freon 11 was analysed in 2 brands.



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#### REFERENCES

- 1) F. Moser, PME Research Laboratory Monthly Progress Report, July 1980.
- 2) Memo from R. Ferguson to W. Fink - August 25, 1980.
- 3) Memo from W. Fink to R. Ferguson - November 7, 1980.
- 4) F. Moser, PME Research Laboratory Monthly Progress Reports, April / May / June 1980.
- 5) Memo from H. Böckle to W. Fink - September 1, 1980.
- 6) Memo from W. Fink to H. Böckle - September 16, 1980.
- 7) Memo from H. Böckle to W. Fink - October 20, 1980.
- 8) Memo from W. Fink to H. Böckle - November 4, 1980.

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Table 1

OMN and NPY in the Sidestream Smoke of the SPOTLESS - Cigarettes

Cigarette Code	DMN (ng/cig.)	NPY (ng/cig.)	N-NO <sub>3</sub> (%)
QS - A - TOT	267	58	0.27
QS - A - TOT / SPO	50	7	0.03
QS - A - MD	306	91	0.25
QS - A - MD / SPO	54	8	0.02
QS - A - CH	297	61	0.30
QS - A - CH / SPO	47	9	0.02
QS - A / SPO / SPO	75	8	0
QS - B - TOT	222	75	0.25
QS - B - TOT / SPO	72	13	0
QS - B - FC	191	77	0.03
QS - B - FC / SPO	122	15	0.007
QS - B - BU	413	177	0.46
QS - B - BU / SPO	94	18	0.05
QS - B - OR	*	*	0.04
QS - B - OR / SPO	84	16	0
QS - B / SPO / SPO / SPO	88	12	0

\* Cigarettes cannot be smoked

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